

Appl. No. 10/027,136
Reply to Office Action of January 16, 2004
Docket No. ONDAT-019US

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Previously amended) A gas-generating composition consisting essentially of:

- (a) ammonium nitrate;
- (b) metal oxyacid salt which produces a basic substance in combustion;
- (c) ammonium perchlorate; and
- (d) at least one kind of combusting component selected from the group consisting of polymer binder, energetic material, and microcrystalline carbon powder, wherein the ammonium nitrate constitutes between 50 and 97 weight % of the sum of the ammonium nitrate, the metal oxyacid salt, and the ammonium perchlorate.

Claim 2. (Original) A gas-generating composition according to Claim 1, wherein the metal oxyacid salt comprises at least one compound selected from the group consisting of alkali metal nitrate, alkali metal nitrite, alkali earth metal nitrate, and alkali earth metal nitrite.

Claim 3. (Original) A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali metal nitrate, and the molar ratio of the ammonium perchlorate with respect to the alkali metal nitrate is between 0.8 and 1.2.

Claim 4. (Original) A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali metal nitrite, and the molar ratio of the ammonium perchlorate with respect to the alkali metal nitrite is between 0.8 and 1.2.

Claim 5. (Original) A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali earth metal nitrate, and the molar ratio of the ammonium perchlorate with respect to the alkali earth metal nitrate is between 1.6 and 2.4.

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Claim 6. (Original) A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali earth metal nitrite, and the molar ratio of the ammonium perchlorate with respect to the alkali earth metal nitrite is between 1.6 and 2.4.

Claim 7. (Original) A gas-generating composition according to Claim 1, wherein the combustible component constitutes between 2 and 60 weight % of the sum of the ammonium nitrate, the metal oxyacid salt, the ammonium perchlorate, and the combustible component.

Claim 8. (Original) A gas-generating composition according to Claim 1, wherein the metal oxyacid salt is potassium nitrate, and said ammonium nitrate is phase-stabilized ammonium nitrate, which is phase-stabilized by using said potassium nitrate.

Claim 9. (Canceled) A gas-generating composition according to Claim 1, further comprising a stabilizer for suppressing natural decomposition of the gas-generating composition.

Claim 10. (Original) A gas-generating composition according to Claim 1, wherein the oxygen-balance value of the gas-generating composition is between -0.1 and +0.1 (g/g).

Claim 11. (Original) A gas-generating composition for vehicle passenger protecting device, comprising:

- (a) phase-stabilized ammonium nitrate having an average particle size between 1 and 1000 μ m;
- (b) potassium nitrate having an average particle size between 1 and 1000 μ m;
- (c) ammonium perchlorate having an average particle size between 1 and 1000 μ m; and

(d) microcrystalline carbon powder having an average particle size between 1 and 500 μ m,

wherein the phase-stabilized ammonium nitrate constitutes between 50 and 97 weight % of the sum of the phase-stabilized ammonium nitrate, the potassium nitrate, and the ammonium perchlorate.

Claim 12 (Currently amended) A gas-generating composition for vehicle passenger protecting device, comprising consisting essentially of:

- (a) phase-stabilized ammonium nitrate;
- (b) potassium nitrate;
- (c) ammonium perchlorate; and
- (d) microcrystalline carbon powder,

wherein the phase-stabilized ammonium nitrate constitutes between 50 and 97 weight % of the sum of the phase-stabilized ammonium nitrate, the potassium nitrate, and the ammonium perchlorate.

Claim 13. (Currently amended) A gas-generating composition for vehicle passenger protecting device, comprising:

- (a) phase-stabilized ammonium nitrate having an average particle size between 1 and 1000 μ m;
- (b) nitrate of alkali metal or alkali earth metal having an average particle size between 1 and 1000 μ m;
- (c) ammonium perchlorate having an average particle size between 1 and 1000 μ m; and
- (d) microcrystalline carbon powder having an average particle size between 1 and 500 μ m,

wherein the phase-stabilized ammonium nitrate constitutes between 50 and 97 weight

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% of the sum of the phase-stabilized ammonium nitrate, the nitrate, and the ammonium perchlorate.

Claim 14. (Currently amended) A gas-generating composition for vehicle passenger protecting device, comprising:

- (a) phase-stabilized ammonium nitrate having an average particle size between 1 and 1000 µm;
- (b) nitrate of alkali metal or alkali earth metal having an average particle size between 1 and 1000 µm;
- (c) ammonium perchlorate having an average particle size between 1 and 1000 µm; and
- (d) microcrystalline carbon powder having an average particle size between 1 and 500 µm.

Claim 15. (Previously presented) A gas-generating composition consisting essentially of:

- (a) ammonium nitrate;
- (b) metal oxyacid salt which produces a basic substance in combustion;
- (c) ammonium perchlorate;
- (d) at least one kind of combusting component selected from the group consisting of polymer binder, energetic material, and microcrystalline carbon powder, wherein the ammonium nitrate constitutes between 50 and 97 weight % of the sum of the ammonium nitrate, the metal oxyacid salt, and the ammonium perchlorate; and
 - (a) at least one of;
 - a stabilizer, and
 - a combustion catalyst.

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Claim 16 (New) The gas-generating composition according to claim 11, further comprising:

- (e) at least one of:
 - a stabilizer, and
 - a combustion catalyst.